

FIGURE 2

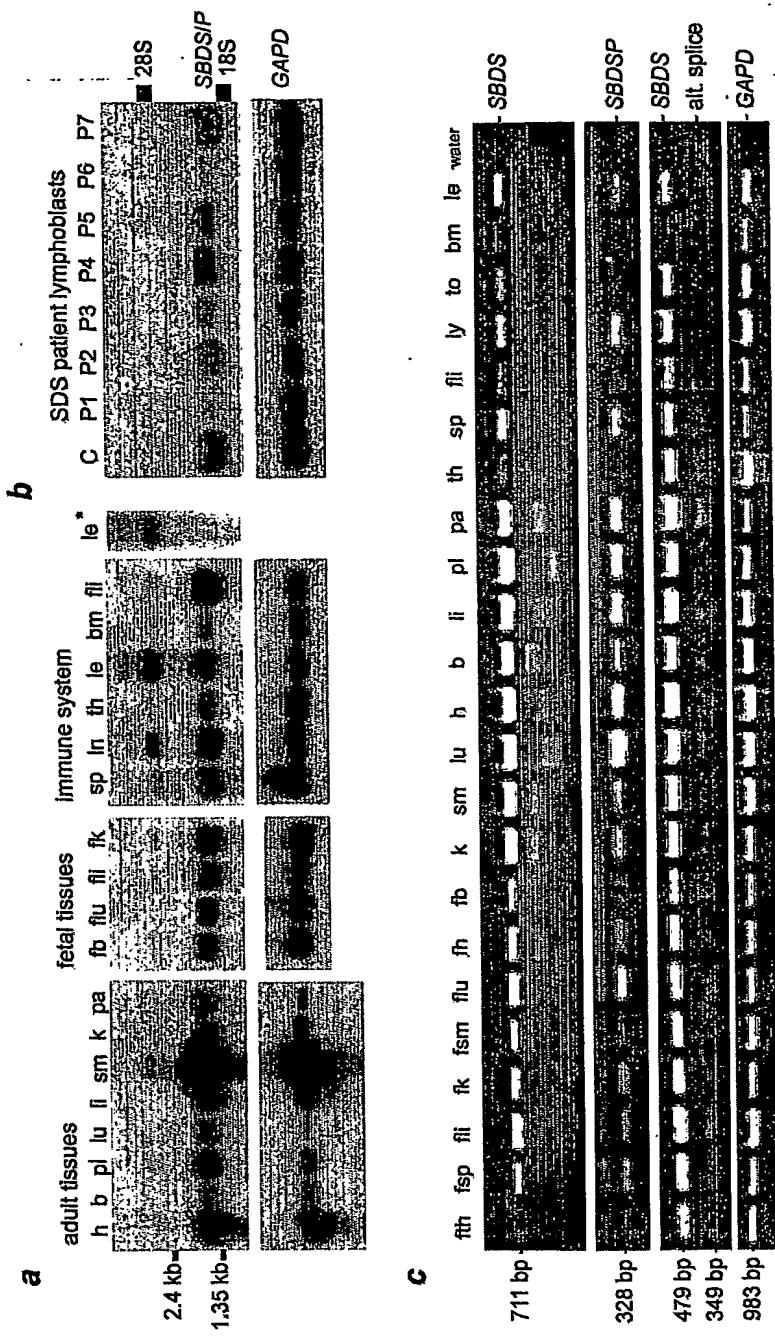


FIGURE 3

U1-like zinc finger

Ath ADECMSEIDMDDSRADLKDYSF
Gar+ AEECLADVELSDSKTDLQDYSF

Figure 4

SBDS cDNA Sequence ID NO:1

-184 gtaagtaagc ctgccagaca cactgtgacg gctgcctgaa gctagtgagt cgcggcgccg
-124 cgcactggc gttgggtcag tgccgcgcgc cgatcggtcg ttaccgcgag ggcgtgggtgg
-64 cttcaggt ggacggcgccg ggtcagccct ggttcggccgg ttctgggtc tttgaacagc
-4 cgcgATGTCG ATCTTCACCC CCACCAACCA GATCCGCTA ACCAAATGTTGG CCGTGGTACG
+57 GATGAAGCGT GCGGGGAAGC GCTTCGAAAT CGCCTGCTAC AAAAACAAAGG TCGTCGGCTG
+117 GCGGAGCGGC GTGGAAAAAG ACCTCGATGA AGTTCTGCAG ACCCACTCAG TGTTTGTA
+177 TGTTCTAAA GGTCAAGGTTG CCAAAAGGA AGATCTCATC AGTGCAGTTG GAACAGATGA
+237 CCAAACTGAA ATCTGTAAGC AGATTTGAC TAAAGGAGAA GTTCAAGTAT CAGATAAAAGA
+297 AAGACACACA CAACTGGAGC AGATGTTAG GGACATTGCA ACTATGTTGG CAGACAAATG
+357 TGTGAATCCT GAAACAAAGA GACCACACAC CGTGATCCTT ATTGAGAGAG CCATGAAGGA
+417 CATCCACTAT TCGGTGAAAA CCAACAAAGAG TACAAAACAG CAGGCTTGG AAGTGATAAA
+477 GCAGTTAAAA GAGAAAATGA AGATAGAACG TGCTCACATG AGGCTTCGGT TCATCCCTCC
+537 AGTCAATGAA GGCAAGAACG TGAAAGAAAA GCTCAAGCCA CTGATCAAGG TCATAGAAAG
+597 TGAAGATTAT GGCAACAGT TAGAAATCGT ATGTCCTGATT GACCCGGGCT GCTTCCGAGA
+657 AATTGATGAG CTAATAAAAA AGGAAACTAA AGGCAAAGGT TCTTTGGAAG TACTCAATCT
+717 GAAAGATGTA GAAGAAGGAG ATGAGAAATT TGAATgacac ccatcaatctt cttcacctct
+777 aaaacactaa agtggttccg tttccgcgg cactgttca tgcgtgtgt ctgcacaata
+837 ctgccttaaa ctatggaca ttttctactt tggtaaca gtcggacacag caaggcttc
+897 ctacataagt ataataatgt gggaaatgatt tggtaatataactgg ggtctaaatc
+957 ctaaagcaaa atggaaactc caagatgca agtccagagt ggcattttgc tactctgtct
+1017 catgccttga tagctttcca aatgaaatgt tacttgaggc agctttgtg ggtgaaaatg
+1077 tatttgtaca gtagagtaag attatttaggg gtatgtctat acaacaaaaag ggggggtctt
+1137 tcctaaaaaa gaaaacatata gatgcctcat ttctacttaa tggaaacttgt gttctgaggg
+1197 tcattatggt atcgtatgt aaagcttgg tggatgttccct gattatctga gaaacagata
+1257 tagaaaaattt gtgccggact taccttcat tgaacatgtt gccataactt agattattct
+1317 tggtaaaaaaa ataaaagtca cttatttcta attcttaaag tttataatat atattaatat
+1397 agctaaaattt gtatgtatc aataaaaacca ctcttatgtt tatt

SBDS Amino Acid Sequence ID NO:2

1 MSIFTPTNQI RLTNVAVVRM KRAGKRFEIA CYKNKVVGWR SGVEKDLDEV LQTHSVFVNV
61 SKGQVAKKED LISAFGTDDQ TEICKQILTK GEVQVSDKER HTOLEQMFRD IATIVADKCV
121 NPETKRPYTV ILIERAMKDI HYSVKTNKST KQQALEVIKQ LKEKMKIERA HMRLRFILPV
181 NEGKKLKEKL KPLIKVIESE DYGQQLEIVC LIDPGCFREI DELIKKETKG KGSLEVNLK
241 DVEEGDEKFE

Figure 5

SBDS Exon 1:

| | | |
|--------|------------------------|-----------------------------|
| SBDS | Primer A (SDCR9x1BF) → | gcgtaaaaaqccacaatacgcaggcgt |
| SBDSP | | |
| MUSBDS | | gcggtaaaagccacaatgcgcaggcgt |
| | | |
| | | aacgacccgccttccttgaggtgcct |

Primer Q (RTSDCR91F)

→

-184

SBDS catcgctcactttccccccggcttctgctccacctgacgcctgcgcagtaagtaaqc
 ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
 SBDSP catcgctcacttctccccccggcttctgctccacctgacgcctgcgcagtaagtaaqc
 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
 MUSBDS qqqtggaaactaqagggcgtaaaaagtcacggcgcgcagggcgtggttgtttcttatcggc

| | |
|--------|---|
| SBDS | <u>ctgccaqacacactgtgacggctgcctgaagctagtgagtcgcggccgcgcactggtg</u> |
| SBDSP | ctgcccagacacgctgtggccgcgcctgaagctagtgagtcgcggccgcgcactttgtg |
| MUSBDS | ctagtgcgccacttqacqcatgtgcagtagggcaatcgggcgtgcggtagctttccct |

| | |
|--------|--|
| SBDS | gttgggtcagtgcgcgcgcgcgttcgttaccgcgaggcgctggtgcccttcaggct |
| SBDSP | gttgggtcagtgcgcgcgcgcgttcgttaccgcgaggcgctggtgcccttcaggct |
| MUSBDS | gttgggttcgcgcgcgcgcgttcgttaccgcgaggcgctggtgcccttcaggct |

I F T P T N Q I R L T N V A V V R M K R

SBDS ATCTTCACCCCCACCAACCAGATCCGCCTAACCAATGTGGCCGTGGTACGGATGAAGCGT
 SBDSP atcttcacccccaccaaccagatccgcctaaccatgtggccgtggatcgatgaagcgc
 MUSBDS ATCTTCACCCCCACCAACCAGATCCGACTGACCAATGTGGCCGTGGTGCAGATGAAGCGG

I F T P T N Q I R L T N V A V V R M K R

A G K R F E I A C Y K N K V V G W R S G

SBDS GCCGGGAAGCGCTTCGAAATCGCCTGCTACAAAAACAAGGTCGTCGGCTGGCGGAGCGGG
 SBDSP gccaggaagcgcttcgaaatcgccctgtacagaaacaaggctcgtcggctggcgagcgcc
 MUSBDS GGAGGGAAAGCGCTTCGAAATCGCCTGCTATAAAAACAAGGTCGTCGGCTGGCGGAGTGGC

G G K R F E I A C Y K N K V V G W R S G

128

SBDS GTgtgagtagccccctccctcgggcctggcctggcctgagccgtcacctccgaggcgg
 SBDSP ttgtgagtagccccctccctcgggcctggcctggcctggcctgagccgtcacctccgaggcgg
 MUSBDS GTgtgagtaatccctgtgcccagagttcgccgcccctggcctccctaaccggctcctgcg

SBDS cctgtctctgcccccaagtgcgatgtggccaggctgggtgtt---ggccggggaggaa
 SBDSP cctgtctctgcccccaagtgcgatgtggccaggctgggtgttggccggaggaa
 MUSBDS acccatcggtaccccttcaggcctggttaccgattcggttgggtctgcttggatt

SBDS aatggaacattcctgtgagcatgagacgtcgctgtccgagcttggcgctaaagccaa
 SBDSP aatggaacattcctgtgagcatgagacgtcgctgtccgagcttggcgctaaagccaa
 MUSBDS ttgttagtatcataaaaactgccaactacaaacgccatcagagccgggtgggaccgatgg

← SDCR9x1seqRev

SBDS gggtttcttcttatttqattqattcgqattgggtgttgggtttgggtttttgtttgtt
 SBDSP gggtttctt---tatttgggtggtccgattgggtgttgggtttgggtttttgtttgtt

MUSBDS tttaggcctgtatccagcgccccagggaaactgaggcgaggaggattgctgcattccag

SBDS Exon 2:

Primer E (SDCR9x2BF) →

| | |
|--------|--|
| SBDS | aaatqtaaaggcaaatacgggtctgagtttggaaaatgttccctcaggccgatgcgggca |
| SBDSP | aaatggtagggcaaatacagttctgagtttggaaaatgttccctcaggccgatgcgggca |
| MUSBDS | gtagtgtttcgctactgccatctagggacagatattccaggacagaagaaacaccactc |

| | |
|--------|---|
| SBDS | gttcacttgaggccaggagttcgaggccagcctggccaacatgaaacccatctctacta |
| SBDSP | gatcacttgaggccaggagttcgaggccagcctggccaacatgaaacccatctctacta |
| MUSBDS | cccaccacaccctgagttccttacataaaacaatgatgtagtttccctctgtggta |

| | |
|--------|--|
| SBDS | aaaatacaaagttagccgggtgtggtggcgcatgcctgtaatcccagttactcaggaggc |
| SBDSP | aaaatacaaaattagccgggtgtggtggcgcatgcctgtaatcccagctactcaggaggc |
| MUSBDS | agtgggagaatccagatactgtccttcgcaggtagccaccagagagagagtgtggtgtgt |

| | | |
|--------|---|-----------------------------|
| | | Primer C (SDCR9/SDCR9Lx2) → |
| SBDS | aagaaaaagaaaactgccctctacactaaaggcatcagggggatttgtgtcttgc | |
| SBDSP | -----aagaaaactgccctctacactaaaggcatcagggggatttgtgtcttgc | |
| MUSBDS | tctgcctcctaaatggtgagttacagatgtgcacatcacacccagttgcagcacttgc | |

| | T | H | S | V | F | V | N | V | S | K | G | Q | V | A | K | K | E | D | L | I |
|--------|-----|-----|-----|----|----|----|----|----|-----|----|----|-----|---|-----|----|----|----|----|----|----|
| SBDS | CCC | ACT | CAG | TG | TT | TG | AA | AT | GTT | C | AA | AGG | T | CAG | GT | TG | CC | AA | AG | GA |
| SBDSP | ccc | act | cag | tg | tt | tg | aa | at | gtt | c | aa | agg | t | cag | gt | tg | cc | aa | ag | ga |
| MUSBDS | CCC | ATT | CAG | TG | TT | TG | AA | AT | GTT | CC | AA | AGG | T | CAG | GT | TG | CC | AA | AG | GA |

| | | | | | | | | | | | | | | |
|--------|--|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | S | A | F | G | T | D | D | Q | T | E | I | C | K | Q |
| SBDS | <u>GTGCGTTGGAACAGATGACCAA</u> CTGAAATCTGTAAGCAGgtggtaacagctgcagca | | | | | | | | | | | | | |
| SBDSP | gtgcgttggAACAGATGACCAA | | | | | | | | | | | | | |
| MUSBDS | <u>GTGCATTGGGACAGACGACCAGACTGAAATCTGCAAGCAGgtagg</u> tcgtccgcagggtca | | | | | | | | | | | | | |
| | S | A | F | G | T | D | D | Q | T | E | I | C | K | Q |

| | | | | | | | | | | | | | | |
|--------|---|--|--|--|--|--|--|--|--|--|--|--|--|--|
| SBDS | tagctaaccctaataaccattataacgtattttagatataatataacattaa <u>aggctat</u> | | | | | | | | | | | | | |
| SBDSP | tagctaaccctaataaccattataacgtattttagatataatataacattaa <u>aggctat</u> | | | | | | | | | | | | | |
| MUSBDS | atgtacaacaaatctcacgatggtaggcaacatctggaccactgtgtttactgttttctt | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | |
|-------------------------------------|---|--|--|--|--|--|--|--|--|--|--|--|--|--|
| ← Primer D (SDCR9/SDCR9Lx2R) | | | | | | | | | | | | | | |
| SBDS | <u>ttttctqqaqaaqactaacc</u> aagcaataatgtgaactgcacagtgtcacttctaataa | | | | | | | | | | | | | |
| SBDSP | <u>ttttctqqaqaaqactaacc</u> aagcaataatgtgaactgcacaaatatcacttctaataa | | | | | | | | | | | | | |
| MUSBDS | gatgagttttgtttagcattttggccctccacctccagtttatattgtt | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | |
|-------------------------------|----------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|
| ← Primer F (SDCR9x2BR) | | | | | | | | | | | | | | |
| SBDS | <u>taaaqaacttqqt</u> | | | | | | | | | | | | | |
| SBDSP | taaagaacttgggt | | | | | | | | | | | | | |
| MUSBDS | ggcaatttgggaa | | | | | | | | | | | | | |

SBDS Exon 3:

| | | | | | | | | | | | | | | |
|-------------------------------|---|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Primer G (SDCR9x3BF) → | | | | | | | | | | | | | | |
| SBDS | <u>gctcaaaccattacttacatattgtat</u> agctggagaggatgaaatataattttctccat | | | | | | | | | | | | | |
| SBDSP | gctcaaaccattacttacatattatagctggagaggatgaaatataattttctccca- | | | | | | | | | | | | | |
| MUSBDS | tgtaagctgctgctgggttaaggcagcacgtggctcgctgagcagctgcagtggacgc | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | |
|-------|---|--|--|--|--|--|--|--|--|--|--|--|--|--|
| SBDS | <u>ccagttactcattttatgttagttaataat</u> atgtgtgatagagaaaagatagtgtat | | | | | | | | | | | | | |
| SBDSP | ---gttactcattttgtcgtagttaataatgtgtgatagagaaaagatagtgtat | | | | | | | | | | | | | |

MUSBDS cgccctcccttcctccccgctacctacctacctgtgcagttagagagatacccagaactgtgagg

259
|
I L T K G E V Q V S D

..

| | |
|--------|---|
| SBDS | ttcttaaatgtgtggcatttttttagATTTGACTAAAGGAGAAGTTCAAGTATCAGAT |
| SBDSP | ttcttaactgtgtggcatttttttagatttgactaaaggagaagttcaagtatcagat |
| MUSBDS | gctttctctatgttctgcacatcttagATTTGACTAAAGGAGAAGTTCAAGTGTCAAGT |

Primer T (RTSDCR93F) →

K E E R H T O L E M F R D I A T I V A D

| | |
|--------|--|
| SBDS | AAAGAAAGACACACACA CTGGAGCAGATGTTAGGGACATTGCAACTATTGTGGCAGAC |
| SBDSP | aaaga----cacacacaactggagcagatgtttagggacattgcaattattgtggcagac |
| MUSBDS | AAAGAACGGCACACACAGCTGGAGCAGATGTTAGGGATATGCCACCATTGTGGCAGAC |

| | ← Primer S (RTSDCR93R) | | | | | | | | | | | | | | 459 | |
|--------|------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|-----|---|
| | K | D | I | H | Y | S | V | K | T | N | K | S | T | K | Q | Q |
| SBDS | A | A | G | G | A | C | A | T | C | A | T | T | C | G | G | t |
| SBDSP | a | a | g | g | a | c | a | t | t | g | g | t | g | a | g | t |
| MUSBDS | A | A | G | G | A | C | A | T | C | A | T | T | C | G | A | t |
| | K | D | I | H | Y | S | V | K | P | N | K | S | T | K | Q | Q |

MUSBDS tqttgtcctcgggacctaaggccatggaaagtgcctgtgcgcctgcctccctatctctgg

| | |
|--------|--|
| SBDS | tcctgcctcagcctcctgagtagctggattataggcacgtgccaccacactcagcta |
| SBDSP | tcctgcctcagcctccaaaggtagctggattataggcacgcgccaccacacccagcta |
| MUSBDS | actcgctctgttagccaggctggcctcgaaactcagaaatccgcctgcctccaa |

SBDS gacccttaggtatccgtccgccttggcctccaaagtgtctggattacaggcatcagcta
SBDSP qacctcaggtatccgtccgccttggcctccaaagtgtctggattacaggcatcagcta

MUSBDS ccagctcaaacc~~tt~~aaagagaagctggact~~tt~~gagt~~cac~~ctgagcc~~tt~~ttgctgtt

SBDS ccgtacc~~ct~~ac~~c~~ct~~c~~taaatttt~~a~~atataaaaaattaaattaaaaatgggtctgca
 SBDSP ccgtacc~~ct~~ac~~c~~ct~~c~~taatttt~~a~~atataaaaaattaaattaaaaatgggtttgca
 MUSBDS t~~g~~t~~g~~tttatt~~a~~acat~~tt~~c~~c~~ta~~c~~ag~~c~~tc~~g~~cc~~t~~gt~~c~~ac~~g~~cc~~a~~tt~~c~~tg~~t~~gg~~c~~ct

← Primer H (SDCR9x3BR)
 SBDS tqqaagcaaqtq
 SBDSP t~~g~~gaagca~~g~~t~~g~~
 MUSBDS ggattccaagca

SBDS Exon 4:

Primer I (SDCR9x4CF) →
 SBDS aaagggtcattttaacacttcttttgaatttttaatttatataattcacataccat
 SBDSP aaagggtcattttaacac~~c~~ct~~c~~ttt~~g~~aatttt~~c~~aatttacatataattcacatacaat
 MUSBDS ctcaaaagaaataacaagtcgggtgtgg~~t~~gacac~~c~~tt~~a~~atcc~~c~~ag~~c~~act~~c~~gg~~g~~ag

SBDS aaattt~~c~~ac~~a~~ct~~c~~ataa~~a~~gtatgt~~a~~c~~t~~ta~~a~~gt~~g~~gtat~~t~~ta~~a~~caa~~a~~gt~~t~~tt~~g~~gaacc
 SBDSP aaattt~~c~~ac~~a~~ct~~c~~ataa~~a~~gt~~g~~gt~~a~~c~~t~~ta~~a~~gt~~g~~gtat~~t~~ta~~a~~caa~~a~~gt~~t~~tt~~g~~gaacc
 MUSBDS gcagaggcaggcgaatttctgagttggaggccag~~c~~ctgagttccaggacagccagg~~g~~cta

SBDS ttccctg~~c~~ac~~c~~ttgg~~t~~cgagaacat~~t~~tc~~a~~c~~c~~caaaaaagaaagtc~~a~~gtat~~c~~att
 SBDSP ttccctg~~c~~ac~~c~~ttgg~~t~~tgagaacat~~t~~tc~~a~~c~~c~~caaaaaagaaagtc~~a~~gtat~~c~~att
 MUSBDS tacagagaaacc~~c~~ct~~g~~tctcgaaaaacc~~aaaa~~aaaaaaaagaaaggaag

| | |
|--------|---|
| SBDS | agttagccatccccatttccccacaggccctcccaaccactaatctccctcgta |
| | . |
| SBDSP | agttagctatccccatttccccacaggccctcccaaccactaatctccctgtcgta |
| | |
| MUSBDS | aaaqaaaagaaaagcaagcaagcaagcaagcgagcaatgggtttcacagcacgaaatcgatag |

| | |
|--------|--|
| SBDS | ttgcttcactttgagctatgatgagcaatgctgctataaaattcttgatgtttctg |
| | |
| SBDSP | ttgcttcactttgagctatgatgagcaatgctgctataaaattcttgatgtttctg |
| | |
| MUSBDS | accaggggcttctgtacagggaaacaaggcacaggaggtcatcaaggactaacgagct |

```

SBDS      tgttagacatatgtttcatttctgtatacctggtgactaccaaacctattctaaaacag
          ||||||| ||||||| ||||||| ||||||| ||||||| ||||||| ||||||| ||||||| |||
SBDSP     tgttagacatatatttcatttctgtatacctggggactaccaaacctattctaaaacag
          | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
MUSBDS    cacatcgaccacctgtgcactgtcccccataaacctcagattgcacaagctcagc

```

MUSBDS cccccgtctcctccacatccagctgccagtqactgacgctgcctgcgggtcagtggcagag

| | |
|--------|--|
| SBDS | ca cccggcta at tttctttttt gtat ttttagtgg agac ggggttt caccatgttggc |
| SBDSP | cac ccggcta at tttctttttt gtat ttttagtaga gagac ggggttt caccatgttggc |
| MUSBDS | gccaacaaaaagacat tttgtctgttct tagagatgtac ggaaattcccaccgcacacat tt |

SDCR9x4seqB →

| | |
|--------|--|
| SBDS | aattacaggcgtgagccaccacacacctggccttcacttcttcatagtttttgaaacaca |
| SBDSP | gattagaggcgtgagccaccacacacctggccttcacttcttcataatttttgaaacaca |
| MUSBDS | ccactgaactgagttccagccttaacgttgcttctgcccgaagcaaaaattatttttt |

| | |
|--------|--|
| SBDS | aaagctttcttcttgataagtccaaattttctattttttaacggtcacttatgtt |
| SBDSP | aaagctttcttcttgataagtccaaattttcta-ttttttttaacggtcacttatgtt |
| MUSBDS | ttccatttcacaaaatgagacactagctcattttaggtattctaggattgtggtag |

| | |
|--------|---|
| SBDS | cttaatgttatacctaagaaaaccattacctaattccaaactacatggaaactactttgtttt |
| SBDSP | cttaatgttatacctaagaaaaccattacctaattccaaactacatggaaactactttgtttt |
| MUSBDS | cttggctgtaaaactgctggcataaggcagctatgtggaaactgctttgtcatgtctaa |

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| | |
|--------|--|
| SBDS | tgaaaaccttatgaaataatataatagtagaagaaaattgcattctcgattttgtcttggtagG |
| SBDSP | tgaaaaccttatgaaataatataatagtagaagaaaattgcattctcgattttgtcttggtagg |
| MUSBDS | catataaatttgtcagcacaaaactaagtaacgagcaccccttgcattgtcttaagG |

| | |
|--------|---|
| | A L E V I K Q L K E K M K I E R A H M R |
| SBDS | CTTTGGAAGTGATAAAAGCAGTTAAAGAGAAAATGAAGATAGAACGTGCTCACATGAGGC |
| SBDSP | ctttggaaagtgataaaagcagttaaaagagaaaaatgaagatagaacgtgctcacatgaggg |
| MUSBDS | CTTTGGAAGTGATAAAAGCAGCTGAAAGAGAAGATGAAGATAGAGCGGGCCCACATGCGAT |
| | A L E V I K Q L K E K M K I E R A H M R |

| | |
|--------|---|
| | L R F I L P V N E G K K L K E K L K P L |
| SBDS | TTCGGTTCATCCTTCCAGTCATGAAGGCAAGAAGCTGAAAGAAAAGCTCAAGCCACTGA |
| SBDSP | ttcagttcatccttccagtgaaatgaaggcaagaagctgaaagaaaagctcaagccactga |
| MUSBDS | TGCGCTTCATCCTGCCAGTGAACGAAGGGAAAGAAGCTGAAGGAGAAGCTGAAGCCACTGA |

L R F I L P V N E G K K L K E K L K P L

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I K V I E S E D Y G Q Q L E I

| | |
|--------|---|
| SBDS | TCAAGGTCAAGAAAGTGAAGATTATGGCCAACAGTTAGAAATCgtaaagagtcaaatatt |
| SBDSP | tcaaggtcatagaaaagttaaagattatggccaacagttagaaaatcgtaagagtcaaatatt |
| MUSBDS | TGAAGGTGGTGGAGAGTGAGGACTACAGCCAGCAGCTGGAGATCgtaaagatgatggtggc |

M K V V E S E D Y S Q Q L E I

| | |
|--------|---|
| SBDS | ttctttgcttcatgttacctaaatattgtattctctagtaataaattttagcaaacatt |
| SBDSP | ttctttgcttcatgttacctaaatattgtattctctagtaataaattttagcaaacatt |
| MUSBDS | ggggagcaggtggcgcagccaaggcccattatgacccttaacacattatttcttg |

← Primer J (SDCR9x4CR)

| | |
|--------|-------------------------------|
| SBDS | tagatqttgttaaac-qtcaqatattttc |
| SBDSP | cagacattgttaaacagtcagatatttc |
| MUSBDS | gcttccttctacccaaatagcctcggtc |

SBDS Exon 5:

Primer K (SDCR9x5CF) →

| | |
|--------|---|
| SBDS | <u>tccactgtqatgtqaactaactcatctgacactacttgaagttctaaaatcttgcaaa</u> |
| SBDSP | tccactgttagatgtqaactaaccatctgacactacttgaagttctaaaatcttgcaaa |
| MUSBDS | gtataactgtggctgtctttagacacacaggcatcgatcccattacagatggttgt |

| | |
|--------|---|
| SBDS | actgtacacatggccaggcacagtggctcgtaatccagcacccatggaggcc |
| SBDSP | actgtacacgtggccaggcacagtggctcatcgtaatccagcacccatggaggcc |
| MUSBDS | gagccacttgtggatttagctcagaacctctggaaagagcagccagtgtga |

| | |
|------|--|
| SBDS | aaggtagcagataacatggtaaaccctatctctactaaaaataaaaaataagccag |
|------|--|

| | |
|--------|---|
| SBDSP | gaggcgagcagataaacacggtgaaaccctgtctactaaaaataaaaaataagccag |
| MUSBDS | gcatctctacagcctctgaaccaggcttgcataaggcgtctactctcagtatg |

| | |
|--------|--|
| SBDS | gtgtgggtgg-ttcctgtaatcccagttctggaggctgaggcaggagaatcact |
| SBDSP | gtgtgggtggcgt-ctgtaatcccagttctggaggccgaggcaggagaatcact |
| MUSBDS | agctgcagcactggccaggtgagtcttcaagggtgtcttaatcaggctttactgctgt |

| | |
|--------|---|
| SBDS | tgaacctggaggcggaggctgcagtgagccaaatcacaccactgcactctatctc-aa |
| SBDSP | tgaacctggagggtggaggctgcagtgagccaaatcacaccactgcactctatctcaa |
| MUSBDS | aacagacaccaggaccaatgcaagtcttataaagaacaacattttagttagtgcgttgc |

| | |
|--------|---|
| SBDS | aaaaaaaaat--aa-attaacatacacatggtgtctacataagtcttcacattgcttttct |
| SBDSP | aaaaaaaaataaaacaaaaacatacacatggtgtctacgtaaatgtcttcacattgcttttct |
| MUSBDS | caggttcagagggttcagtccattatcaagggtggagcatggtagtatccagggtggaaatg |

| | |
|--------|--|
| SBDS | cttcatacgtggagggtgactttactgagctataaaatgtaaatgtctaaattttagtatga |
| SBDSP | cttcatacgtggagggtgactttactgagctataaaatgtaaatgtctaaattttagtatga |
| MUSBDS | atacaggaggggctgagagttcgacatcttcatctgaaggctgctagcagaataactgact |

| | |
|--------|---|
| SBDS | gaagaatcagagtttctagttgtcccttcattacagctgaagaatcagaataagt |
| SBDSP | gaagaatcagagtttctagttgtcccttcattacagcggaaatcagaataagt |
| MUSBDS | tcgaggctgttaggatgagggtttaaagcctatgaccacaggacacacccatata |

| | |
|--------|--|
| SBDS | tttaaacataggattaatgcctgtcacagggggctacatggacacttgaggcagagg |
| SBDSP | tttaaacataggattaatgcctgtcacagggggctacatggataacttgaggcagagg |
| MUSBDS | tgtcactccccggctgagcatataaaaccgtAACACGGGATAAGTGCCTTCCAAAG |

| | |
|--------|--|
| SBDS | ctaaactggaacccaggatgtgccgcctaccattgtcttatctattgcaccatagaactg |
| SBDSP | ctgaactggaacccaggatgtgccgcctaccattgtcttatctattgcaccatagaactg |
| MUSBDS | tccaaacagtaggtgcttagaatcgagacagaacccaggcccagcctgctgccctggcct |

| | |
|--------|--|
| SBDS | tggtattatttagagatctggacagcattgtgctgcctcaaaqqaagttaaagctgagtt |
| SBDSP | tggtattat---gagatctggacagcattgtgctgcctcaag---ttaagctgagtt |
| MUSBDS | ccatgtgagcagcacctagaacacagtcatacatgtgcctgagcattcaactggcct |

| | |
|--------|---|
| SBDS | tattctgtgtcttgctcatcctcatgtggtaatctgctacgttaatgtttcagGTATGT |
| SBDSP | tattctgtgtcttgctcatcctcatttggtaactgctacgttaatgtttcaggtatgt |
| MUSBDS | attctgtgccatgcccattttcccttggaaaccagctgtgttactcattgcagGTGTGC |

625
|
V C

— V — C

| | |
|--------|--|
| | L I D P G C F R E I D E L I K K E T K G |
| SBDS | CTGATTGACCCGGGCTGCTTCGAGAAATTGATGAGCTAATAAAAAGGAAACTAAAGGC |
| SBDSP | ctgattgacctggctgttccgagaaattgtatgagctataaaaaaggaaaccacaaaggc |
| MUSBDS | CTCATCGACCCAGGCTGCTCAGAGAAATTGATGAGCTAATAAAAAGGAAACGAAAGGC |

— L — I — D — P — G — C — F — R — E — I — D — E — L — I — K — K — E — T — K — G —

| | |
|--------|--|
| 750 | K G S L E V L N L K D V E E G D E K F E |
| SBDS | AAAGGTTCTTGGAAAGTACTCAATCTGAAAGATGAGCTAAGAAGGAGATGAGAAATTGAA |
| SBDSP | aaaggttcttggaaagtactcaatctgaaagatt-gaagaaggagatgagaaattgaa |
| MUSBDS | AGGGGTTCTCTGGAAAGTGCTCAGTCTGAAGGACGTGGAGGAAGGCGATGAGAAGTTGAA |

— R — G — S — L — E — V — L — S — L — K — D — V — E — E — G — D — E — K — F — E —

| | |
|-------|---|
| SBDS | tgacacccatcaatcttccacctctaaaacactaaagtgtttccgttccgacggcact |
| SBDSP | tgacacccatcagtcttccacctctaaaacactaaagtgtttccgttccaaacagcact |

MUSBDS TGAcaccgccccggctcctcaactggaggcacgaccgaggacgcttggccacacgcacgc

| | |
|--------|--|
| SBDS | gttaacagtggacacagcaaggcttcctacataagtataataatgtggaaatgattgg |
| SBDSP | gttaacagtggacacagcaaggcttcctacataagtataataatgtggaaatgattgg |
| MUSBDS | taaacatttacccaggtacctgggtattttgttgcattggggttccagcaaaaatg |

| | |
|--------|--|
| SBDS | ttttaattataaaactggggctaaatctaaagcaaaattgaaaactccaa <u>qatgc</u> aaaatg |
| | |
| SBDSP | ttttaattataaaactggggctaaatctaaagcaaaattgaaaactccaggatgcaaaat |
| | |
| MUSBDS | aaaaataacctaaaatacagagtccagaacagctgctcaactgctgcgtctgcctttctag |

← Primers L/R (RTSDCR95R/SDCR9x5BR)
 SBDS ccagagtggcattttgctactctgtctcatgccttgcatacgctttccaaaatgaaagttac
 SBDSP ccagagtggcattttgctactctgtctcatgccttgcatacgctttccaaaatgaaagttac
 MUSBDS ttccaggggaccagagacagcattggtgataagaaggtagatgttagtccatgacagatc

| | |
|--------|--|
| SBDS | ttgaggcagctttgtgggtgaaaagttattgtacagtagagtaagattattaggggta |
| SBDSP | ttgaggcagctttgtgggtgaaaagtttttgcgtacagtagagtaagattattaggggta |
| MUSBDS | attggagaggggtctgaataacaaagggggtacgcctgtggaaagaagatgggggttt |

```

SBDS      tgtctatacacaacaaaagggggggtcttcctaaaaaagaaaaacatatgatgcttcatttc
          ||||||||| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
SBDSP      tgtctatacgcacaaaa-gggggggtcttcctaaaaaagaaaaac--atgatgcttcatttc
          | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
MUSBDS     ctgaataatgaagtgcaggtatggggtgtgagcatggagagaagagttcctgggtccctc

```

| | |
|--------|--|
| SBDS | tacttaatggaacttgtgttctgagggtcattatggtatcgtaatgtaaagcttggatga |
| SBDSP | tacttaatggaacttgtgttctgagggtcattatggtatcgtaatataaagcttggatga |
| MUSBDS | ccaatagattataatgactagggagaatttgactttctaatttcaaccaacatgctac |

| | |
|--------|---|
| SBDS | tgttcctgattatctgagaaacagatataaaaaattgtgccggac-t---tacctttca |
| SBDSP | tgttcctgattatctgagaaacagatataaaaaattgtgtcgactaaataatttcg |
| MUSBDS | aaaaactgacttagattattcttggaaaatatatacagtcattaactaattcttaa |

| | |
|--------|---|
| SBDS | ttgaacatgctgccataacttagattattcttggtaaaaaataaaaagtcacttattct |
| SBDSP | ttgaacatgctgccataacttagattattcttggtaaaaaataaaaagtcacttattct |
| MUSBDS | aggtttataatatatgttagtatagttaaaattctatgtaatcaataaaacttatttta |

(polyadenylation
site)

| | |
|--------|--|
| SBDS | aattcttaaagttataatataatattaatataatagctaaaattgtatgtaatcaataaaaacc |
| SBDSP | aattcttaaagttataatataatattaatataatagctaaaattgtatgtaatcaataaaaacc |
| MUSBDS | c |

(end of human transcript, mRNA of 1605nt)

| | |
|-------|--|
| SBDS | actcttatgtttattaaactatggctgtgtttctagacaacttcctaactcccttctt |
| SBDSP | actcttatgtttattaaactatggctgtgtttctagacaacttcctaactcccttctt |

| | |
|-------|-------|
| SBDS | ttctc |
| SBDSP | |
| | ttctc |

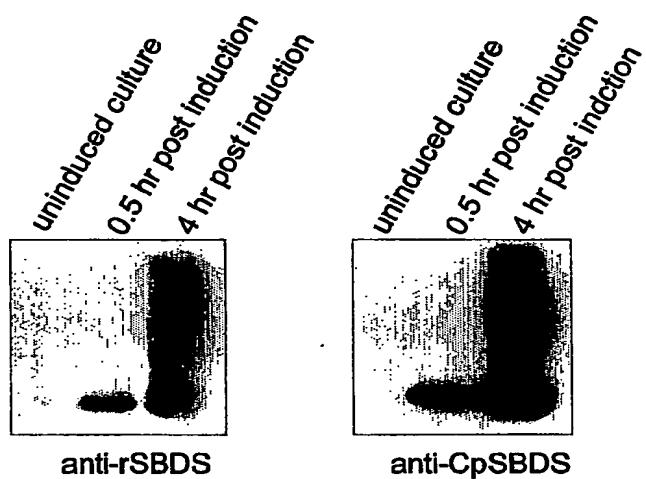
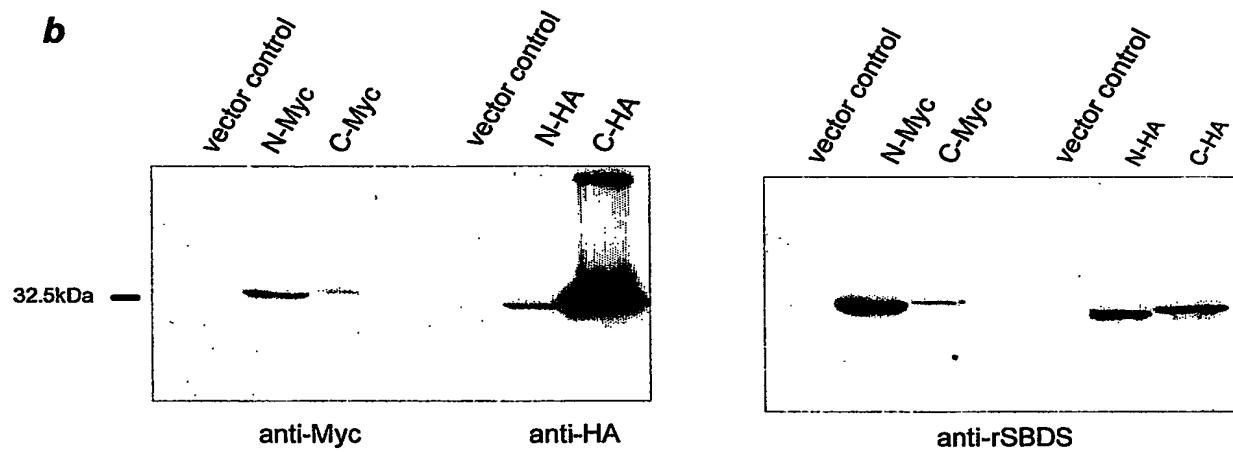
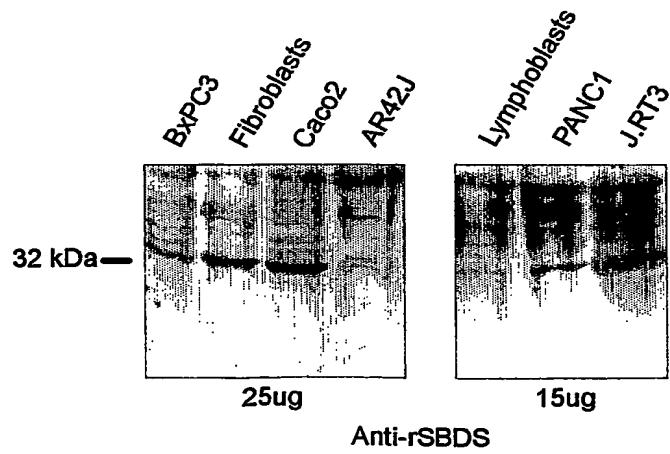
a**b****c**

FIGURE 7